



## **HARRISBURG**

**ISGS #63**

### **POTENTIAL WETLAND COMPENSATION SITE**

FAP 332

Saline County, near Harrisburg, Illinois

**Primary Project Manager: Geoffrey E. Pociask**

**Secondary Project Manager: Gregory A. Shofner**

### **SITE HISTORY**

- January 2000: ISGS was tasked by IDOT to conduct an Initial Site Evaluation of the site.
- April 2000: ISGS submitted an Initial Site Evaluation report identifying the site as having low-moderate potential for wetland restoration.
- December 2001: ISGS was tasked by IDOT to conduct a Level II hydrogeologic characterization of the site.
- March 2002: ISGS initiated monitoring activities at the site.
- April 2004: Level II hydrologic characterization report was submitted to IDOT, and the created wetland was constructed.

### **WETLAND HYDROLOGY CALCULATION FOR 2004**

We estimate that 1.3 ac (0.5 ha) out of an excavation of 20.0 ac (8.1 ha) satisfied wetland hydrology criteria for greater than 5% of the growing season in 2004, whereas no area satisfied wetland hydrology for greater than 12.5% of the growing season. These estimates are based on the following factors.

- According to the Midwestern Climate Center, the median date that the growing season begins in Harrisburg is April 1 and the season lasts 211 days; 5% of the growing season is 11 days and 12.5% of the growing season is 26 days.
- Total precipitation for the period from September 2003 through August 2004 was 85% of normal. Drier than normal conditions prevailed in October and December 2003 and during February through April, and June 2004. Precipitation amounts were at or above normal for September and November 2003 and in January, May, July, and August 2004.
- In 2004, monitoring wells 4S, 5S and 6S satisfied wetland hydrology criteria of the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual for greater than 5% of the growing season. No wells satisfied the wetland hydrology criteria for greater than 12.5% of the growing season.
- The RDS data logger, located at the confluence of the drainage ditches at the east end of the site, indicated that surface-water inundation occurred below 111.0 m (364.2 ft) for a duration sufficient to satisfy wetland hydrology criteria for greater than 5% of the growing season. No area was inundated for greater than 12.5% of the growing season.
- Limitations of the wetland hydrology determination are as follows:
  - The area of wetland hydrology was calculated using GIS methods. The wetland-

hydrology polygon was drawn from an ISGS topographic map (0.1-meter contour interval) rectified to GPS locations of water-level instruments.

- GPS coordinates of the water-level instruments were determined during July 2003.

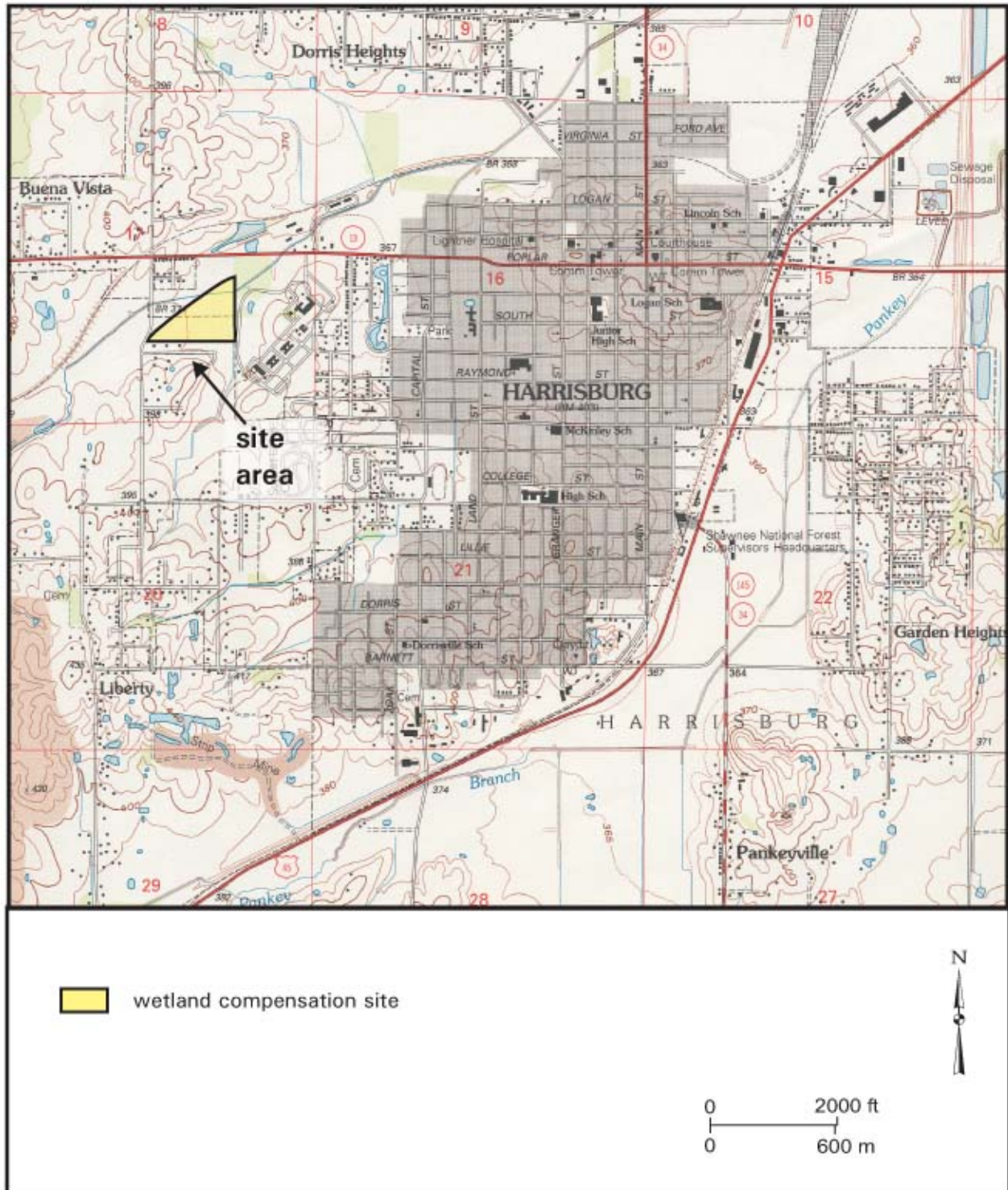
#### PLANNED FUTURE ACTIVITIES

- Monitoring will continue through 2009 or until no longer required by IDOT.

# Harrisburg Potential Wetland Compensation Site (FAP 332)

## Site and Vicinity

from the USGS Topographic Series, Harrisburg, IL 7.5-minute Quadrangle (USGS 1996)  
contour interval is 5 feet

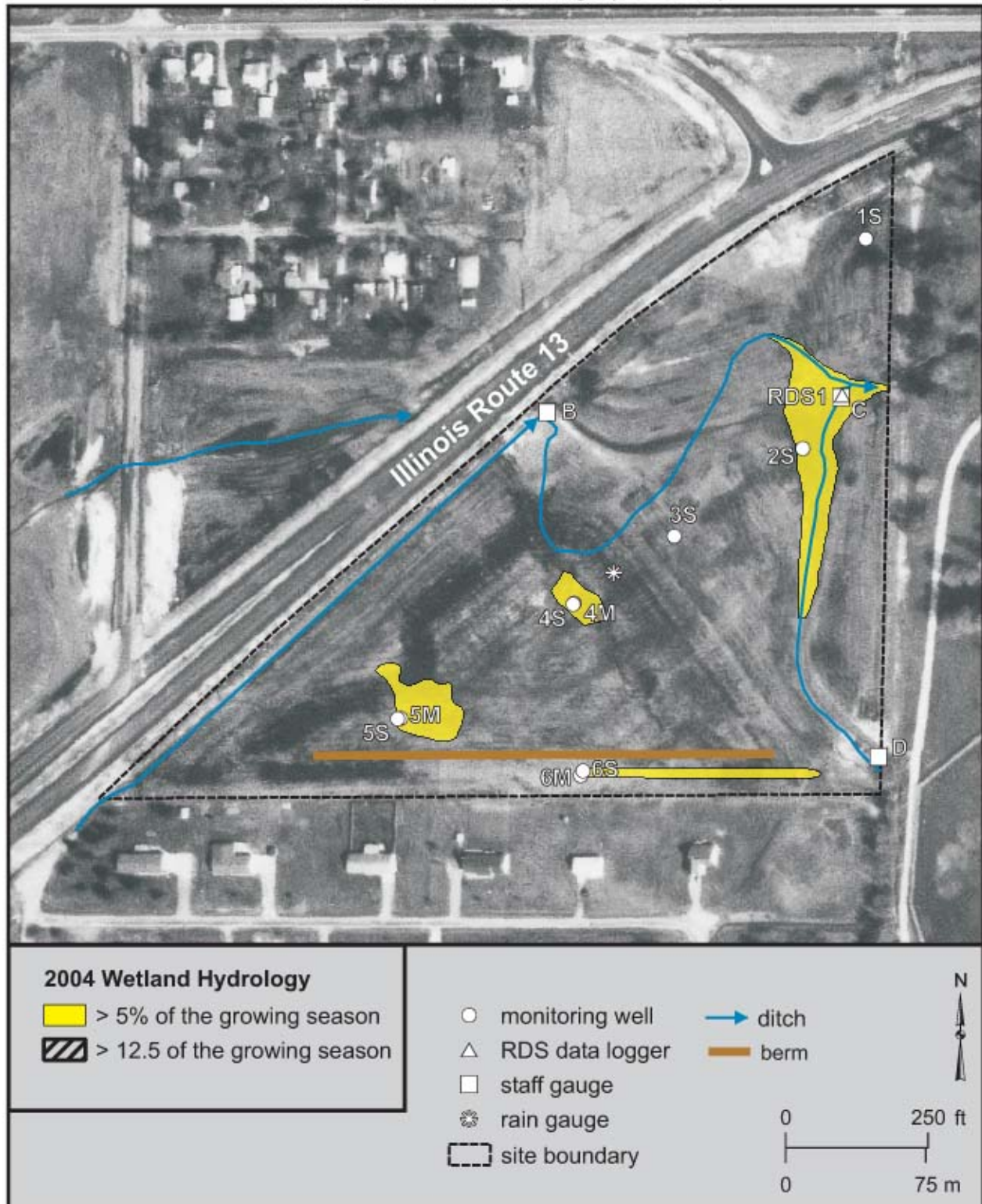




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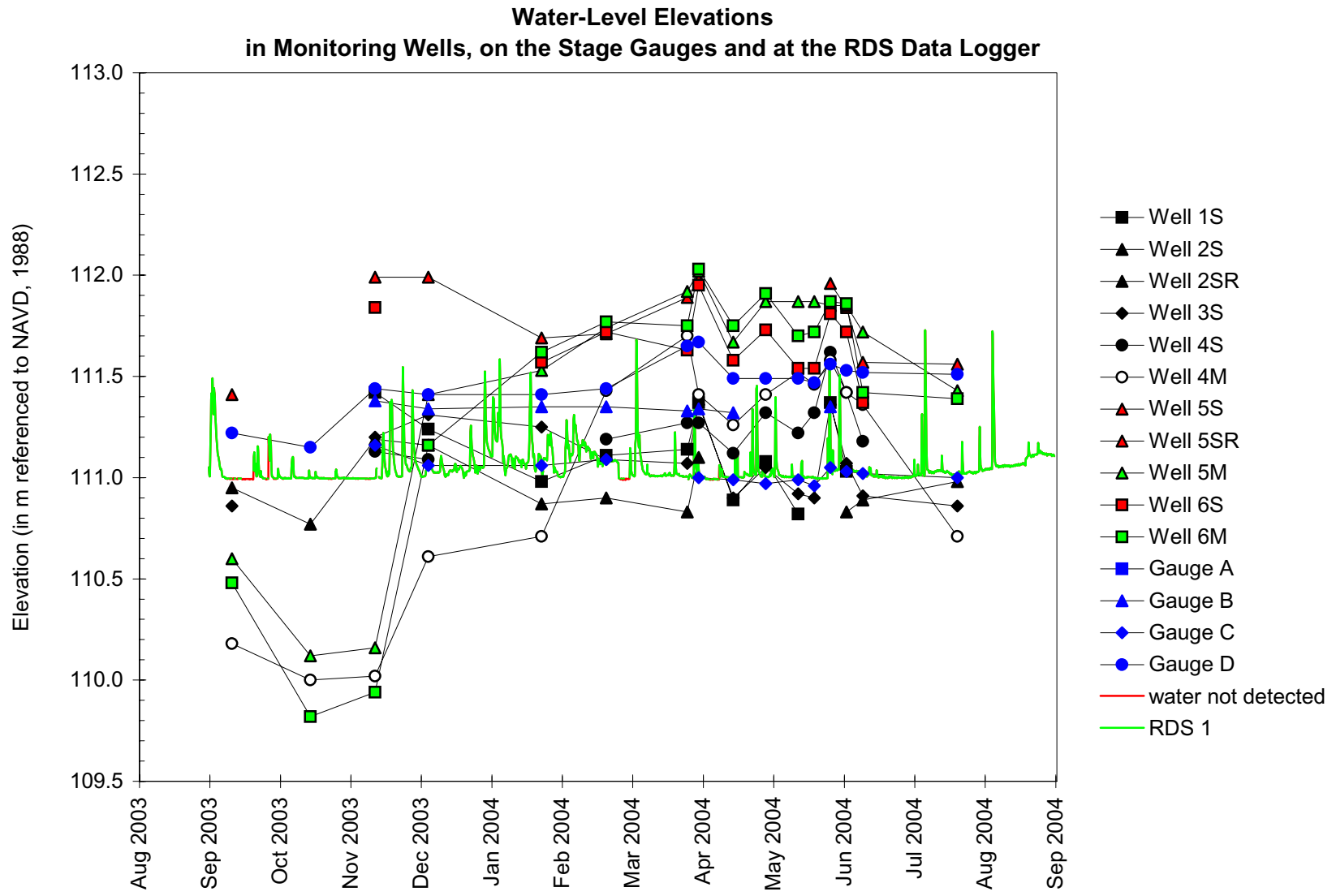
## Estimated Areal Extent of 2004 Wetland Hydrology

base map generated from IDOT aerial photography rectified to USGS digital orthophotograph  
Harrisburg, NW quarter quadrangle (ISGS 2002)



# Harrisburg Potential Wetland Compensation Site

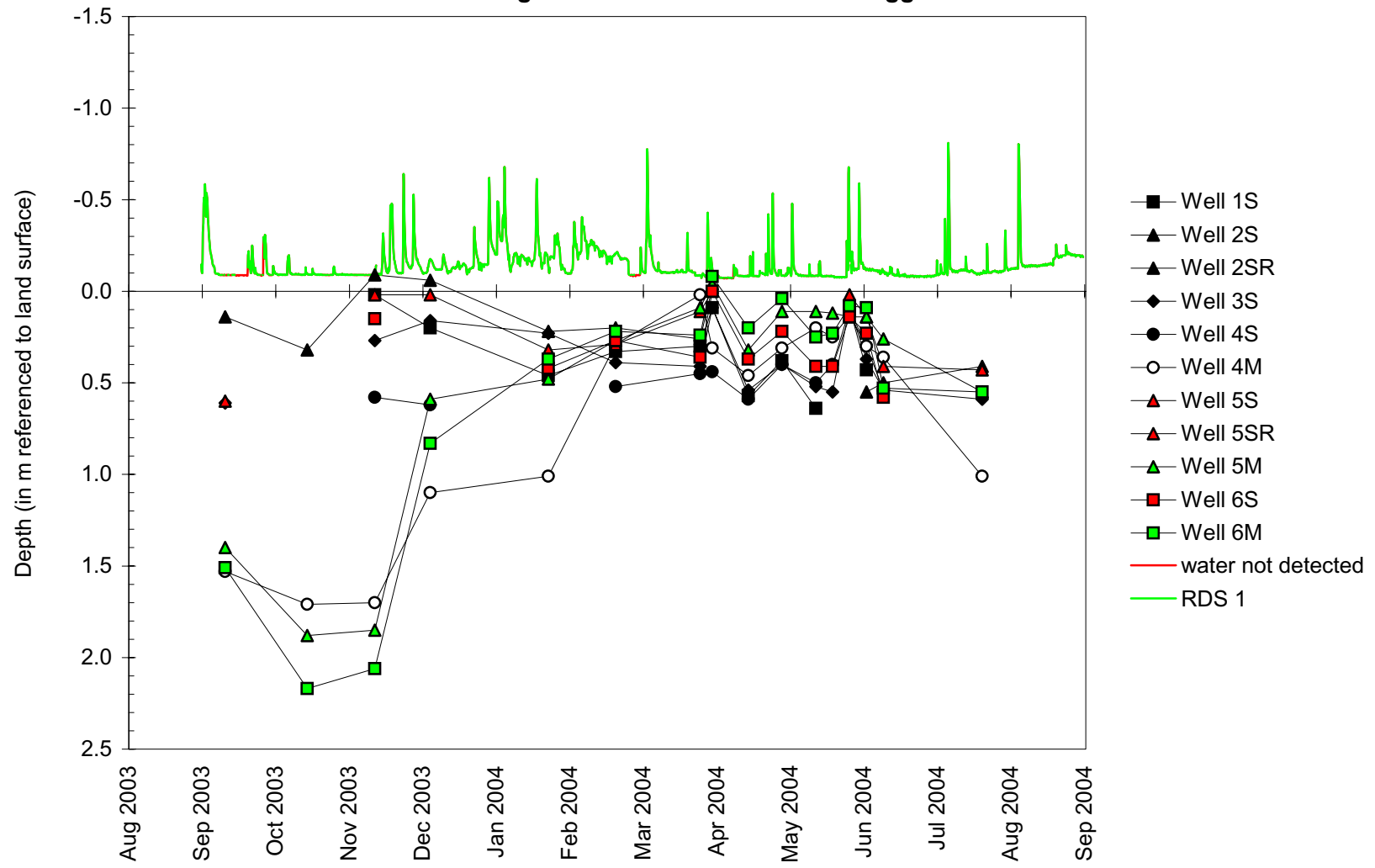
September 1, 2003 to September 1, 2004



# Harrisburg Potential Wetland Compensation Site

September 1, 2003 to September 1, 2004

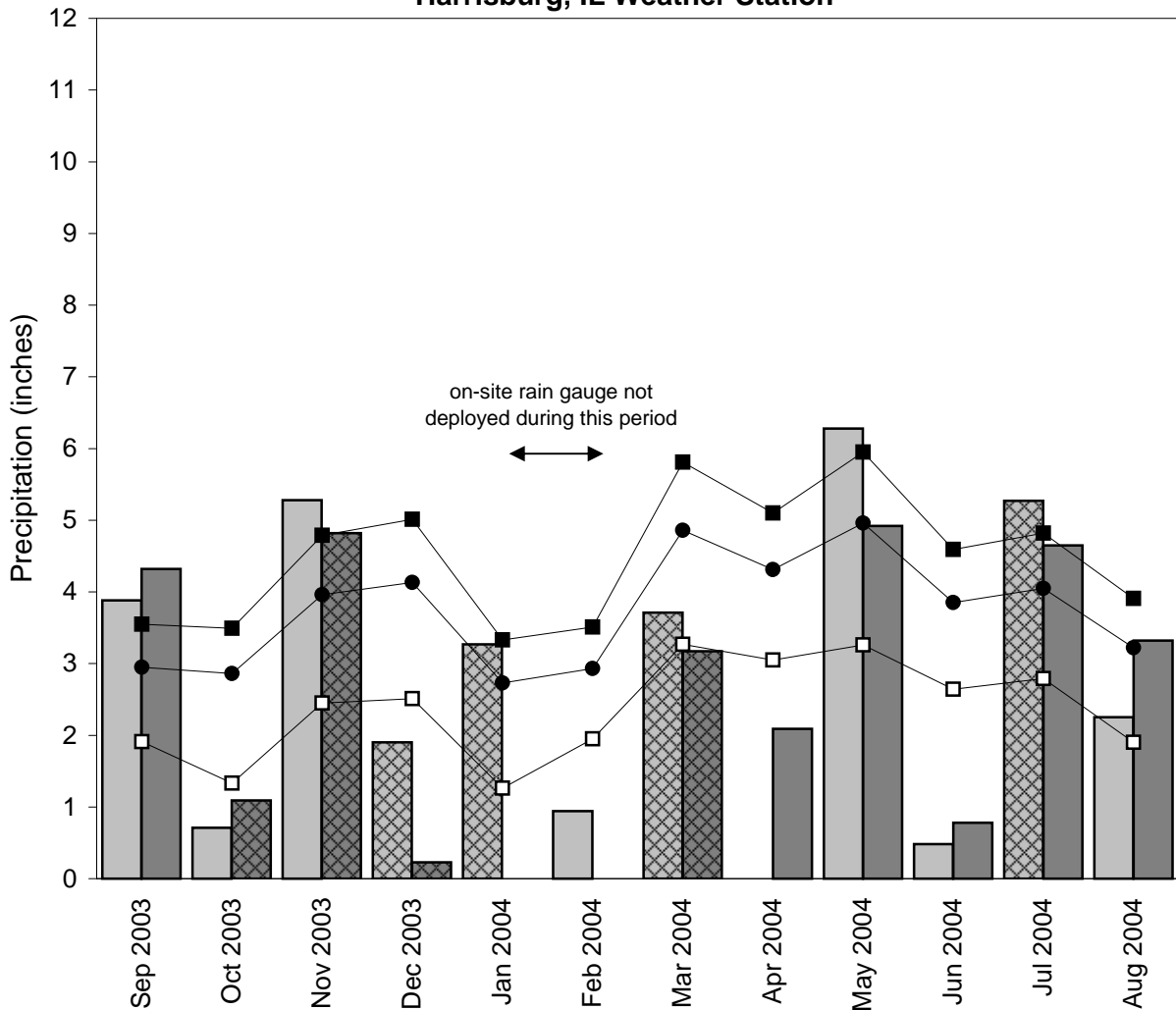
## Depth to Water in Monitoring Wells and at the RDS Data Logger









# Harrisburg Potential Wetland Compensation Site

## September 2003 through August 2004

**Total Monthly Precipitation Recorded On Site and at the Harrisburg, IL Weather Station**



-  monthly precipitation recorded at weather station (Midwestern Regional Climate Center)
-  monthly precipitation recorded on site by ISGS
-  1961-1990 monthly average precipitation (National Water and Climate Center)
-  1961-1990 monthly 30% above average threshold (National Water and Climate Center)
-  1961-1990 monthly 30% below average threshold (National Water and Climate Center)
-  data incomplete

Graph last updated October 1, 2004